Title

Male Toilet Spray Shield

Field of the Invention

The present invention relates to the field of sanitary devices, and more particularly to urine over spray shields which removably attach to a toilet and prevent urine from spraying outside a toilet bowl onto walls and floors.

Background of the Invention

Toilet over spray shields are extremely helpful for the training of young male children to properly use toilet facilities. Consequently, the use of toilet over spray and splash shields is well known in the prior art for the purpose of preparing young boys for urinals in public restrooms as well as household toilets in a neat and orderly fashion. There are a number of toilet over spray and splash shields currently in the market which are generally directed towards the purpose of preventing urine from being sprayed outside of the toilet bowl. While these devices to a certain extent prevent urine from splashing and spraying outside the bowl, most of them fail to disclose outwardly projecting flanges as the sole and convenient attachment means to the toilet seat rim. In addition, none of the disclosed are equipped with a domed cover to avoid upward splash. Moreover, few have handles that are built into the device for easy removal and those that do have handles at all include removably attached handles (i.e. screwed, glued) that may cause injuries to the youngest of users.

For example, U.S. Patent No. 2,791,780 issued to Krischer discloses a urinal training device for little boys with a frustoconical shield wall that sits on the entire inner rim of a toilet having a cover at the top to prevent spillage from all directions. However, the lack of a large opening for urine entry prevents proper shielding from all directions of spray. Moreover, the device disclosed does not disclose a handle making it difficult to remove and attach for younger users, nor does it disclose a method for keeping the toilet seat clean during use. In fact, this device would soil the toilet seat during use.

Further, U.S. Patent No. 2,980,919 issued to Otto and Swamm discloses another toilet shield that is open at the top rather than covered but which attaches to a toilet rim by means of an outwardly projecting flange. However, the complicated attachment means wherein the outwardly projecting flange necessitates lip means to hold makes the device complicated and difficult to use. In addition, the device does not disclose a domed upper exterior that shields urine from upward spraying.

Similarly, U.S. Patent No. 3, 071,778 issued to Renshaw discloses yet another toilet guard that is funnel shaped and made from a solid material. Still this device fails to disclose a dome shaped upper portion which may serve as a cover and shield the area surrounding the toilet from upward spray or back splash. Furthermore, the device does not include a built in handle for easy removal.

Yet another device, U.S. Patent No. 5,465,431 as issued to Wertz discloses a rigid plastic urinal trainer that is tubular, open at the top and is attached to an entire toilet bowl with specific lips, having means to wash out urine via tube attached to the water main. The Wertz device also discloses a clamp to stop water flow. The device, however, fails to disclose a domed cover means to prevent upward spray, a wider opening for aim, and targeting stickers. Moreover, the device covers the whole seat making it difficult to attach and remove for a young child.

Still another device, U.S. Patent No. 5,983,410 issued to Webster, discloses an open top toilet back splash and over spray shield that utilizes a hook affixed to the shield that attaches to the inner ridge of the upper rim of the toilet bowl at the back region of the toilet bowl to affix the device to a toilet bowl. However, the rather complicated hook

fastening element may make this device difficult to fasten onto the toilet bowl. When young males want to use the toilet they may not have the time to hook the device properly.

Similarly, U.S. Patent 6,385,785 issued to Linden discloses the use of a urine shield removably attached to a toilet seat wherein the shield attaches to the raised toilet bowl seat by a generally u-shaped hook. However, this particular design does not allow for a domed upper portion that may contain urine over spray.

There are also several design patents that disclose urine shields and their equivalents. For example, U.S. Design Patent No. D245,425 issued to Annis discloses the design of a semicircular urinal shield for toilet seats that is open at the top with means to attach to the inner rim of a toilet. The Annis patent fails to disclose a domed cover which may prevent upward spray and furthermore does not include a built in handle making the device difficult to remove from a toilet seat.

Similarly, U.S. Design Patent No. D365,386 issued to McDonald and McDonald discloses the design of a commode rim shield with an outwardly extending flange. The lack of height in the walls of the device and lack of a domed cover makes this device less able to prevent urine spray from reaching floors and walls.

Further, U.S. Design Patent No. D394,497 issued to Johnson discloses the design for a shield that is mounted on the bowl's rim by slidingly removal of the device. However, this device is not sufficiently tall enough to prevent all over spray from soiling the area around the toilet, and further it does not have a domed lid or covering to prevent urine over spray.

Additionally, U.S. Design Patent No. D394,900 issued to Kang, discloses a

particular splash guard toilet shield that is tapered from back to front and which attaches to a toilet seat by means of a fastener, namely screws. However, the lack of height in the walls of the device and the need to use permanent fastening elements make it somewhat difficult to use on a regular basis.

Finally, U.S. Design Patent No. D458,669 issued to Sanders discloses the design of a toilet splash guard which is attached to toilet seat using outwardly extending curved flanges. The lack of a domed cover, however, makes the device less protective towards upward spray.

Thus, nowhere in the prior is seen a simple, effective, easy to use and manufacture toilet seat shield which can be easily placed upon a raised toilet seat when desired without complicated attachment means, and then removed by pulling one attached handle when the device is no longer in use.

Summary of the Invention

The present invention consists of a urine over spray shield or male toilet spray shield which is approximately one half of an inch in thickness, and extends upwardly from the inner rim of a toilet bowl to a height of approximately 10" to 12" or more, in the case of use for handicapped adults, from the lower portion of the inner rim. The walls of the device are therefore substantially semi-elliptical in construction and are preferably substantially 1/8" thick. The upper portion of the shield is preferably domed to protect against upward spray. The top back or rear exterior portion of the urine over spray shield is preferably provided with a handle that protrudes above the cover and is integral to the mold for the device. The handle will thus be permanently attached to the present invention such that a small child will not be able to remove the handle. The toilet shield is also provided with removable attachment means wherein the urine shield merely sits on the toilet seat rim without an complicated attachment process. The attachment means can be a flat flange that merely sits on the rim, an "L" shaped flange that sits flat on the rim but is held in place by a protruding body against rim, angled wedges falling from the middle point of the shield in four parts of the shield that sit on the rim, a ridged flange providing frictional support or other easily removable attachment means. The flange is preferably between a half and two inches wider than a toilet rim so as to stabilize the device and prevent toppling. Any equivalent attachment device may be used as long as it is simple in design and construction such that a young child may readily place it upon the rim of a toilet seat without having to touch the bowl to actually use the present invention.

The present invention may be easily and economically constructed from preferably a

single sheet of molded thermoplastic. Any other polymer which is light weight and easy to clean may also be used. The light weight will allow even a small child to easily attach the present invention to a toilet bowl as well as remove it by simply lifting the present invention off of the toilet shield. Further, the durability of molded plastic is desirable when children are handling the present invention and they may be rough with the device during installation or removal. The material shall be easily cleaned by parents and other adults by use of strong antibacterial, chlorine, or other cleaning agents. The shield may act both as a channeling device to direct the flow of urine into a toilet bowl as well as an over spray guard. To ensure the channeling, the back or rear interior portion of the toilet shield is to be provided with an area to place targeting stickers of different varieties thereupon. The stickers may be of cartoon or other licensed characters. Even a bullseye sticker may be used to make an amusing game out of proper toilet use for both male children and adults. The user or user's parent may thus purchase different stickers to fit the game of their choice. In another preferred embodiment, other targeting means include colored plastic dots, a raised target surface, or an "X marks the spot" which may be incorporated as a part of the mold to create an all inclusive targeting and spray shield invention. In yet an additional preferred embodiment of the present invention, the target for urination may be present as a laser cut or die cut design appearing on the back side of the shield. This embodiment would be more economical to purchasers as it would not require future sticker purchasing. The present invention will thus make proper channeling a fun activity.

The invention will ultimately encourage good habits in young boys as well as older men by ensuring that the toilet seat is in the upright position prior to urinating into the

toilet because the toilet seat must be in its upright position in order to use the device. Moreover, the present invention will teach young boys how to properly aim urine preparing them for outside urinals. The hygiene ideals taught by the invention will be invaluable to the child.

5

Objects of the Invention

Thus, it is one primary object of the present invention to provide a simple male toilet spray shield which is easily and readily placed upon the rim portion of a toilet bowl when a toilet seat is in its raised position.

And, it is a further object of the present invention to provide a male toilet spray shield which is made of a lightweight thermoplastic or other polymeric substance which is one piece in construction, making it easy to remove from a toilet seat due to its light weight as well as to clean because of the type of material used.

It is another primary object of the present invention to provide a simple lightweight male toilet spray shield which extends from the top rim of a toilet bowl upwardly to a height of approximately 10" to 14" or more, when the device is used with adult handicapped individuals to make it extremely difficult for a person to over spray the shield with urine such that it soils either the floor or walls surrounding the toilet.

It is yet another primary object of the present invention to provide a lightweight male toilet spray shield which is essentially semi-elliptical in shape, thereby conforming to the shape of a toilet seat rim.

It is still a further object of the present invention to provide a male toilet spray shield with flange attachment means wherein the flanges may be flat and wide, "L" shaped, ridged to provide friction, or angled wedges from the middle point of the shield down from four evenly spaced points on the shield, such that the flanges sit on the rim of a toilet bowl without toppling and the shield requires no other attachment means.

It is yet an additional primary object of the present invention to provide a lightweight

male toilet spray shield which has a dome covered top which may be curved to prevent upward spray from hitting the user or splashing onto the floor or walls.

It is another primary object of the present invention to provide a lightweight male toilet spray shield which includes a handle as part of the shape, such that anyone may easily remove the present invention from the toilet seat.

It is still another primary object of the present invention to provide a lightweight male toilet spray shield which includes a handle as part of the shape wherein the handle may be merely two finger holes within the semi-elliptical wall, a portion of a domed cover, or a protruding handle means, such that anyone may easily lift the present invention from the toilet bowl.

It is yet an additional object of the present invention to provide a male toilet spray shield which can only be used on a raised toilet seat, so as to teach a young child proper toileting habits of always raising the toilet seat prior to urinating.

And, it is still an additional object of the present invention to provide an interior back or rear wall with an area for amusing images, such as cartoon or licensed character or even bulls eye stickers or colored dot, raised bulls eye or "X marks the spot" in the mold to make proper urine channeling an amusing game.

These and other objects and advantages of the present invention can be readily derived from the following detailed description of the drawings taken in conjunction with the accompanying drawings present herein and should be considered as within the overall scope of the invention.

Brief Description of the Drawings

Figure 1 is a front perspective view of the present invention showing the device in use sitting within the toilet bowl attached to the toilet seat rim via flat flanges, wherein an amusing image is provided within interior back wall and a domed cover is shown.

Figure 2 is a rear perspective view of the present invention showing the internal handle means and flat flanges.

Figure 3 is a front perspective view of an alternate preferred embodiment of the present invention wherein an upwardly protruding handle means is provided for along with "L" shaped flange attachment means.

Figure 4 is a front perspective view of an alternate preferred embodiment of the present invention which utilizes two holes in place of a handle and does not include a domed cover.

Figure 5 is a rear perspective view of an alternate preferred embodiment of the present invention which utilizes angled wedge flange attachment means.

Detailed Description of the Drawings

Shown now in Figure 1 is one embodiment of the present invention, toilet over spray shield 10 which is provided with interior cylindrical wall 12 along which urine spray may be specifically directed at amusing image 13. The amusing image may be a sticker of a cartoon figure as shown in the figure. The image makes using a toilet a game to young boys such that they learn proper toileting skills. In alternate embodiments of the present invention, sticker 13 may be replaced with imprinted images, a laser image or even a die cut image, all of which are well known in the prior art. In this particular version of over spray shield 10, a domed cover 14 is shown which prevents upward spray from hitting the user, the walls or the floor nearby. Along domed cover 14 at the rear is handle means 16 which is shown in the figure at the rear of the device as an internal part of the mold of the present invention, such that it does not protrude above the domed cover 14. The handle 16 will be part of the mold in order to avoid the problems associated with screwed or glued in handle means, namely injuries to young children as well as to make to device easy to manufacture. Further integral handle 16 will make the present embodiment much easier to clean with no crevices to collect soiling therewithin. The lower exterior semi-elliptical wall 18 of over spray shield 10 is simply placed within the toilet bowl rim 24 protruding into toilet bowl 22 after the toilet seat 26 and lid 28 have been lifted. Along exterior cylindrical wall 18, there exists a flat flange means 20 that sits upon toilet bowl rim 24 such that the toilet over spray shield 10 does not fall into toilet bowl 22. When the device is no longer in use, it may be lifted off of toilet seat by means of handle 16. Of course, it is intended that over spray shield 10 is preferably made from a lightweight

thermoplastic which is simple to blow mold or injection mold, or it may be made from another sturdy but lightweight polymer. Another advantage of thermoplastic or another lightweight polymer substitute is that it will be easy to clean and will not be easily degraded by caustic cleaning chemicals, which are commonly used to clean and sanitize toilets.

Male toilet over spray shield 10 is thus capable of directing and channeling the flow of a stream of urine into the toilet bowl 22 shielding spray from falling on the floor or walls near the toilet. The device is convenient for young boys to remove given its lightweight material. Moreover, the device is a good urine channeling training tool which teaches a young child proper toileting skills by requiring that toilet seat 26 and lid 28 be in an upright position before using the toilet. It is anticipated that the exterior 18 and interior 12 walls of the toilet over spray shield are preferably at least 10" in height above toilet seat rim to ensure that all spray is channeled into the toilet bowl 22 and that nothing ends up on the floor or walls of the bathroom. It is anticipated that the shield 10 may be used with adult handicapped males, and in such an instance, the shield may be from 20 to 22" in height. However, preferable dimensions for the walls may be from 6" to as much as 18" in height when used for children, depending upon the preferences of the user or designer of the particular embodiment of the device. Further, it is anticipated that the walls 18 and 12 when set upon toilet seat rim approximately protrude 1" to 2" in height below the toilet seat rim 24 and flange attachment means 20 in order to ensure that the device sits securely upon rim 24 without toppling. The thickness of the walls of spray shield 10 are substantially 1/8", although thicker or thinner walls may be used, depending on the shape and size of the shield, as well as the material of composition of the spray shield 10.

Figure 2 shows rear perspective view of toilet spray shield 10 in which semi-elliptical exterior wall 18 is shown in more detail. Further one can see how handle means 16 is formed as part of domed cover 14. Flat flange attachment means 20 do not necessarily encircle the entire device and are consequently shown hugging the device without being one single flange piece. This allows the device to be used on any toilet without forming it to the exact dimension of every toilet bowl and rim.

Figure 3 shows another preferred embodiment of the present invention toilet over spray shield 50. Interior semi-cylindrical wall 52 is where urine channeling takes place wherein a raised target 53 is provided for such that the target is part of the original plastic mold. Target over spray shield 50 has a semi-elliptical exterior wall 58 which is permanently attached to flat top 54. Flat top 54 is further provided with handle 56 at the rear which protrudes above the top approximately 1-2" for easy insertion and removal of the present invention. The handle 56 is still a part of the mold for the device to once again avoid problems associated with other handle attachment means. In this particular embodiment, however; is shown "L" shaped flange attachment means 60 that may provide greater stability to toilet spray shield 50 so that it does not topple when a child uses the device.

Figure 4 shows yet another preferred embodiment of the present invention over spray shield 100 wherein the exterior semi-elliptical wall 106 does not end in a cover, but is a much simpler version of the embodiments of over spray shields shown in Figures 1, 2 and 3, above. In this particular embodiment, two holes are provided as a handle 104 along the upper marginal portion of interior semi-elliptical wall 102 for easy insertion and

removal onto a toilet bowl rim. The ridged flange means 108 provide this simple structure frictional support to avoid toppling. Given that it does not have a cover, the device may need this further support. Additionally, in this preferred embodiment, an X marks the spot with sticker 103 or painted lines may be provided to make toileting amusing for young children.

Figure 5 shows yet an additional preferred embodiment of the present invention, over spray shield 150 which shows the use of a domed cover 154 which is provided with a trapezoidal upwardly protruding handle 156 in the center top for easy insertion and removal of over spray shield 150. It is believed that handle 156 which is positioned on top of over spray shield 150 will be much easier to use than a handle located on the back or lower portion of the device. A semi-elliptical outer wall 152 is also provided to which is attached angled wedge flange means 158 which are to be evenly spaced around the device such that it sits upon toilet seat rim 160 without toppling 166 which is capable of bearing upon the lower portion of a toilet seat is provided for securement of the device to an upstanding toilet seat.

Although in the foregoing detailed description the present invention has been described by reference to various specific embodiments, it is to be understood that modifications and alterations in the structure and arrangement of those embodiments other than those specifically set forth herein may be achieved by those skilled in the art and that such modifications and alterations are to be considered as within the overall scope of this invention.